
APPENDIX I

Disturbances and Fragmentation of Wildlife Habitat and Migratory Bird Species

TABLE 1. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN MULE DEER OVERALL HABITAT				
Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	1,081,950 (58%)	1,223,754 (66%)	919,844 (49%)	917,636 (54%)
Timing and Controlled Surface Use	664,264 (36%)	555,025 (30%)	677,370 (36%)	582,623 (35%)
No Surface Occupancy	46,353 (2%)	31,654 (2%)	37,706 (2%)	135,302 (8%)
No Leasing	70,413 (4%)	52,547 (3%)	228,060 (12%)	52,547 (3%)
Tar Sands				
Standard Stipulation	47,192 (3%)	61,424 (3%)	43,531 (2%)	116,208 (7%)
Timing and Controlled Surface Use	212,574 (11%)	198,342 (11%)	195,625 (11%)	101,318 (6%)
No Surface Occupancy	3,805 (<1%)	3,805 (<1%)	3,696 (<1%)	11,597 (1%)
No Leasing	35,044 (2%)	35,044 (2%)	55,763 (3%)	35,046 (2%)
Other Minerals (Open)				
Mineral Material	424,810 (23%)	434,727 (23%)	390,473 (21%)	387,580 (23%)
Oil Shale	298,630 (16%)	312,105 (17%)	292,453 (16%)	290,641 (17%)
Phosphate	86,982 (5%)	86,982 (5%)	62,829 (3%)	83,856 (5%)
Gilsonite	838 (<1%)	840 (<1%)	834 (<1%)	817 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 2. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN MULE DEER CRUCIAL WINTER RANGE HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	0 (0%)	0 (0%)	0 (0%)	169,394 (50%)
Timing and Controlled Surface Use	344,153 (93%)	346,085 (93%)	312,705 (84%)	127,612 (37%)
No Surface Occupancy	8,374 (2%)	9,217 (2%)	6,395 (2%)	28,477 (8%)
No Leasing	19,148 (5%)	16,373 (4%)	52,575 (14%)	16,368 (5%)
Tar Sands				
Standard Stipulation	0 (0%)	0 (0%)	0 (0%)	70,364 (21%)
Timing and Controlled Surface Use	117,292 (32%)	117,292 (32%)	113,902 (31%)	16,528 (5%)
No Surface Occupancy	122 (<1%)	122 (<1%)	126 (<1%)	1,276 (0%)
No Leasing	6,770 (2%)	6,770 (2%)	10,156 (3%)	6,770 (2%)
Other Minerals (Open)				
Mineral Material	132,201 (36%)	132,328 (36%)	121,481 (33%)	122,484 (36%)
Oil Shale	56,042 (15%)	56,042 (15%)	55,769 (15%)	55,440 (16%)
Phosphate	64,308 (14%)	64,308 (17%)	41,192 (11%)	62,299 (18%)
Gilsonite	129 (<1%)	129 (<1%)	129 (<1%)	129 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 3. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN MULE DEER MIGRATION CORRIDOR HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	0 (0%)	0 (0%)	0 (0%)	4,668 (10%)
Timing and Controlled Surface Use	47,090 (100%)	47,090 (100%)	42,869 (91%)	40,945 (87%)
No Surface Occupancy	0 (0%)	0 (0%)	0 (0%)	1,477 (3%)
No Leasing	0 (0%)	0 (0%)	4,221 (9%)	0 (0%)
Tar Sands				
Standard Stipulation	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Timing and Controlled Surface Use	42,222 (90%)	42,222 (90%)	38,395 (82%)	42,222 (90%)
No Surface Occupancy	0 (0%)	0 (0%)	0 (0%)	0 (0%)
No Leasing	0 (0%)	0 (0%)	3,827 (8%)	0 (0%)
Other Minerals (Open)				
Mineral Material	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Oil Shale	3,375 (7%)	3,375 (7%)	3,375 (7%)	3,375 (7%)
Phosphate	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 4. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN ROCKY MOUNTAIN ELK OVERALL HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	448,471 (40%)	574,923 (51%)	390,428 (34%)	463,704 (46%)
Timing and Controlled Surface Use	606,289 (54%)	494,851 (44%)	520,524 (46%)	414,245 (41%)
No Surface Occupancy	16,727 (1%)	12,337 (1%)	10,711 (1%)	74,971 (7%)
No Leasing	61,383 (5%)	50,760 (4%)	211,208 (19%)	50,750 (5%)
Tar Sands				
Standard Stipulation	18,354 (2%)	32,288 (3%)	16,077 (1%)	101,997 (10%)
Timing and Controlled Surface Use	211,885 (19%)	197,952 (17%)	193,599 (17%)	86,390 (9%)
No Surface Occupancy	1,358 (<1%)	1,358 (<1%)	1,246 (<1%)	8,821 (1%)
No Leasing	35,044 (3%)	35,044 (3%)	55,720 (5%)	35,044 (3%)
Other Minerals (Open)				
Mineral Material	255,461 (23%)	259,570 (23%)	222,187 (20%)	233,229 (23%)
Oil Shale	101,133 (9%)	103,862 (9%)	96,191 (8%)	98,425 (10%)
Phosphate	83,177 (7%)	83,553 (7%)	60,656 (5%)	80,052 (8%)
Gilsonite	297 (<1%)	297 (<1%)	293 (<1%)	295 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 5. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN ROCKY MOUNTAIN ELK CRUCIAL WINTER RANGE HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	67,688 (19%)	67,688 (19%)	67,688 (19%)	129,926 (45%)
Timing and Controlled Surface Use	250,181 (68%)	252,886 (69%)	193,400 (53%)	97,291 (34%)
No Surface Occupancy	3,150 (1%)	3,905 (1%)	976 (<1%)	18,071 (6%)
No Leasing	44,514 (12%)	41,055 (11%)	103,470 (28%)	41,061 (14%)
Tar Sands				
Standard Stipulation	4,697 (1%)	4,697 (1%)	4,697 (1%)	68,013 (24%)
Timing and Controlled Surface Use	124,234 (34%)	124,234 (34%)	105,318 (29%)	46,508 (16%)
No Surface Occupancy	345 (<1%)	345 (<1%)	229 (<1%)	2,146 (1%)
No Leasing	31,884 (9%)	31,884 (9%)	50,916 (14%)	31,887 (11%)
Other Minerals (Open)				
Mineral Material	62,322 (17%)	62,367 (17%)	53,663 (15%)	58,926 (21%)
Oil Shale	43,000 (12%)	49,560 (14%)	42,871 (12%)	42,460 (15%)
Phosphate	27,403 (7%)	27,779 (8%)	11,333 (3%)	25,088 (9%)
Gilsonite	49 (<1%)	49 (<1%)	49 (<1%)	49 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 6. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN PRONGHORN HABITAT				
Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	649,626 (85%)	663,164 (86%)	546,664 (71%)	400,846 (55%)
Timing and Controlled Surface Use	95,327 (12%)	85,534 (11%)	185,579 (24%)	284,341 (39%)
No Surface Occupancy	18,994 (2%)	18,753 (2%)	19,047 (2%)	44,178 (6%)
No Leasing	4,531 (1%)	1,027 (<1%)	17,188 (2%)	4,392 (1%)
Tar Sands				
Standard Stipulation	26,750 (3%)	27,051 (4%)	25,563 (3%)	29,695 (4%)
Timing and Controlled Surface Use	21,529 (3%)	21,228 (3%)	20,152 (3%)	18,673 (3%)
No Surface Occupancy	2,889 (<1%)	2,889 (<1%)	2,790 (<1%)	2,800 (<1%)
No Leasing	1,008 (<1%)	1,008 (<1%)	3,671 (<1%)	1,008 (<1%)
Other Minerals (Open)				
Mineral Material	174,474 (23%)	174,723 (23%)	171,584 (22%)	163,743 (22%)
Oil Shale	156,063 (20%)	156,512 (20%)	155,175 (20%)	154,069 (21%)
Phosphate	31,553 (4%)	31,553 (4%)	31,539 (4%)	30,710 (4%)
Gilsonite	321 (<1%)	321 (<1%)	321 (<1%)	315 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 7. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN BIGHORN SHEEP HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	180,612 (42%)	252,009 (58%)	160,509 (37%)	192,076 (55%)
Timing and Controlled Surface Use	197,498 (46%)	155,057 (36%)	147,311 (34%)	78,464 (23%)
No Surface Occupancy	14,997 (3%)	2,996 (1%)	10,970 (3%)	52,445 (15%)
No Leasing	39,947 (9%)	22,993 (5%)	114,263 (26%)	24,971 (7%)
Tar Sands				
Standard Stipulation	1,049 (<1%)	9,048 (2%)	234 (<1%)	24,271 (7%)
Timing and Controlled Surface Use	59,215 (14%)	51,216 (12%)	55,848 (13%)	25,852 (7%)
No Surface Occupancy	0 (0%)	0 (0%)	0 (0%)	1,961 (1%)
No Leasing	13,893 (3%)	13,893 (3%)	18,075 (4%)	13,893 (4%)
Other Minerals (Open)				
Mineral Material	57,475 (13%)	65,535 (15%)	45,161 (10%)	57,475 (17%)
Oil Shale	69,440 (16%)	92,371 (21%)	64,238 (15%)	62,680 (18%)
Phosphate	13,288 (3%)	13,288 (3%)	8,272 (2%)	11,775 (3%)
Gilsonite	254 (<1%)	256 (<1%)	250 (<1%)	239 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 8. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN MOOSE HABITAT				
Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	48,246 (42%)	73,223 (64%)	39,131 (34%)	45,992 (40%)
Timing and Controlled Surface Use	53,405 (47%)	35,057 (31%)	59,747 (52%)	41,324 (36%)
No Surface Occupancy	3,328 (3%)	3,393 (3%)	3,300 (3%)	22,420 (20%)
No Leasing	8,961 (8%)	2,267 (2%)	11,762 (10%)	4,204 (4%)
Tar Sands				
Standard Stipulation	5,663 (5%)	5,663 (5%)	5,663 (5%)	263 (0%)
Timing and Controlled Surface Use	7,660 (7%)	7,660 (7%)	7,660 (7%)	7,847 (7%)
No Surface Occupancy	589 (1%)	589 (1%)	589 (1%)	5,802 (5%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Other Minerals (Open)				
Mineral Material	28,615 (25%)	28,702 (25%)	28,425 (25%)	23,056 (20%)
Oil Shale	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Phosphate	14,101 (12%)	14,101 (12%)	12,905 (11%)	12,976 (11%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 9. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN BLACK BEAR HABITAT				
Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	105,186 (42%)	172,813 (70%)	98,456 (40%)	83,403 (42%)
Timing and Controlled Surface Use	135,115 (55%)	70,795 (29%)	87,354 (35%)	93,337 (47%)
No Surface Occupancy	2,798 (1%)	2,798 (1%)	2,680 (1%)	19,902 (10%)
No Leasing	4,648 (2%)	1,341 (1%)	59,256 (24%)	1,340 (1%)
Tar Sands				
Standard Stipulation	6,699 (3%)	14,667 (6%)	6,726 (3%)	2,581 (1%)
Timing and Controlled Surface Use	33,579 (14%)	25,610 (10%)	32,359 (13%)	31,680 (16%)
No Surface Occupancy	891 (<1%)	891 (>1%)	891 (<1%)	6,908 (3%)
No Leasing	0 (0%)	0 (0%)	1,193 (<1%)	0 (0%)
Other Minerals (Open)				
Mineral Material	28,104 (11%)	28,190 (11%)	27,425 (11%)	21,573 (11%)
Oil Shale	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Phosphate	4,972 (1%)	4,972 (2%)	2,680 (1%)	4,586 (2%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 10. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN RING-NECKED PHEASANT HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	33,987 (62%)	33,900 (61%)	31,444 (57%)	10,515 (22%)
Timing and Controlled Surface Use	4,573 (8%)	10,256 (19%)	6,463 (12%)	16,565 (34%)
No Surface Occupancy	12,876 (23%)	10,704 (19%)	12,877 (23%)	21,536 (44%)
No Leasing	3,700 (7%)	275 (<1%)	4,352 (8%)	271 (1%)
Tar Sands				
Standard Stipulation	1,609 (3%)	1,609 (3%)	1,609 (3%)	43 (<1%)
Timing and Controlled Surface Use	0 (0%)	0 (0%)	0 (0%)	1,564 (3%)
No Surface Occupancy	1,045 (2%)	1,045 (2%)	1,045 (2%)	1,047 (2%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Other Minerals (Open)				
Mineral Material	16,565 (30%)	19,197 (35%)	16,321 (30%)	12,439 (25%)
Oil Shale	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Phosphate	887 (1%)	887 (2%)	887 (2%)	821 (2%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 11. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN RIO GRANDE TURKEY HABITAT				
Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	104,743 (66%)	106,247 (67%)	93,098 (59%)	70,461 (48%)
Timing and Controlled Surface Use	25,620 (16%)	24,115 (15%)	37,252 (23%)	45,765 (31%)
No Surface Occupancy	7,140 (4%)	7,139 (4%)	7,150 (4%)	10,202 (7%)
No Leasing	21,571 (14%)	21,571 (14%)	21,572 (14%)	21,573 (15%)
Tar Sands				
Standard Stipulation	11,527 (7%)	11,527 (7%)	11,438 (7%)	14,538 (10%)
Timing and Controlled Surface Use	13,583 (9%)	13,583 (9%)	13,666 (9%)	10,400 (7%)
No Surface Occupancy	2,428 (2%)	2,428 (2%)	2,432 (2%)	2,598 (2%)
No Leasing	18,389 (12%)	18,389 (12%)	18,391 (12%)	18,391 (1221%)
Other Minerals (Open)				
Mineral Material	34,194 (21%)	34,195 (21%)	34,183 (21%)	33,368 (23%)
Oil Shale	14,520 (9%)	14,520 (9%)	14,520 (9%)	14,475 (10%)
Phosphate	533 (<1%)	533 (<1%)	533 (<1%)	533 (<1%)
Gilsonite	84 (<1%)	84 (<1%)	84 (<1%)	84 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 12. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN BLUE GROUSE HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	80,282 (35%)	145,218 (63%)	72,786 (32%)	54,131 (33%)
Timing and Controlled Surface Use	135,586 (59%)	72,863 (32%)	97,427 (42%)	91,480 (55%)
No Surface Occupancy	2,572 (1%)	2,572 (1%)	2,522 (1%)	8,204 (5%)
No Leasing	12,551 (5%)	10,338 (4%)	58,258 (25%)	12,542 (8%)
Tar Sands				
Standard Stipulation	5,772 (2%)	17,602 (8%)	5,180 (2%)	5,167 (3%)
Timing and Controlled Surface Use	37,658 (16%)	25,828 (11%)	37,358 (16%)	28,321 (17%)
No Surface Occupancy	0 (0%)	0 (0%)	0 (0%)	652 (0%)
No Leasing	7,554 (3%)	7,554 (3%)	8,446 (4%)	7,553 (5%)
Other Minerals (Open)				
Mineral Material	5,980 (3%)	5,980 (3%)	5,837 (3%)	6,153 (4%)
Oil Shale	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Phosphate	21,598 (9%)	21,598 (9%)	21,591 (9%)	20,600 (12%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 13. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN CHUKAR HABITAT				
Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	42,956 (32%)	64,330 (47%)	27,199 (20%)	28,955 (23%)
Timing and Controlled Surface Use	73,361 (54%)	59,147 (44%)	77,585 (57%)	59,862 (47%)
No Surface Occupancy	8,576 (6%)	9,066 (7%)	7,254 (5%)	31,867 (25%)
No Leasing	10,652 (8%)	3,003 (2%)	23,508 (17%)	5,789 (5%)
Tar Sands				
Standard Stipulation	1,887 (1%)	2,765 (2%)	1,807 (1%)	219 (<1%)
Timing and Controlled Surface Use	3,263 (2%)	2,386 (2%)	2,118 (2%)	4,917 (4%)
No Surface Occupancy	0 (0%)	0 (0%)	0 (0%)	14 (<1%)
No Leasing	0 (0%)	0 (0%)	1,225 (1%)	0 (1%)
Other Minerals (Open)				
Mineral Material	30,177 (22%)	30,408 (22%)	24,449 (18%)	22,612 (18%)
Oil Shale	2,534 (2%)	2,864 (2%)	188 (<1%)	2,062 (2%)
Phosphate	34,695 (26%)	34,695 (26%)	33,737 (25%)	33,636 (27%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 14. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN GREATER SAGE-GROUSE WINTERING HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	146,696 (62%)	165,220 (70%)	96,844 (41%)	143,220 (61%)
Timing and Controlled Surface Use	81,510 (34%)	63,445 (27%)	121,534 (51%)	80,390 (34%)
No Surface Occupancy	5,245 (2%)	5,343 (2%)	5,343 (2%)	10,398 (4%)
No Leasing	3,125 (1%)	2,568 (1%)	12,855 (5%)	2,568 (1%)
Tar Sands				
Standard Stipulation	4,396 (2%)	4,597 (2%)	3,011 (1%)	510 (<1%)
Timing and Controlled Surface Use	488 (<1%)	287 (<1%)	1,869 (1%)	4,482 (2%)
No Surface Occupancy	140 (<1%)	140 (<1%)	144 (<1%)	32 (<1%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Other Minerals (Open)				
Mineral Material	79,027 (33%)	79,121 (33%)	77,223 (33%)	75,971 (32%)
Oil Shale	63,660 (27%)	63,660 (27%)	63,660 (27%)	63,660 (27%)
Phosphate	5,790 (2%)	23,962 (10%)	14,359 (6%)	23,419 (10%)
Gilsonite	74 (<1%)	148 (<1%)	74 (<1%)	74 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 15. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN GREATER SAGE-GROUSE BROODING HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	456,122 (56%)	490,288 (60%)	348,154 (43%)	346,050 (48%)
Timing and Controlled Surface Use	324,955 (40%)	291,468 (36%)	399,432 (49%)	319,379 (44%)
No Surface Occupancy	10,988 (1%)	11,181 (1%)	11,101 (1%)	29,982 (4%)
No Leasing	22,755 (3%)	21,883 (3%)	56,133 (7%)	22,720 (3%)
Tar Sands				
Standard Stipulation	13,453 (2%)	23,805 (3%)	10,614 (1%)	18,660 (3%)
Timing and Controlled Surface Use	123,125 (15%)	112,773 (14%)	117,265 (14%)	83,529 (12%)
No Surface Occupancy	608 (<1%)	608 (<1%)	498 (<1%)	608 (<1%)
No Leasing	16,449 (2%)	16,449 (2%)	25,259 (3%)	16,450 (2%)
Other Minerals (Open)				
Mineral Material	203,209 (25%)	203,201 (25%)	198,885 (24%)	193,145 (27%)
Oil Shale	108,106 (13%)	108,106 (13%)	107,990 (13%)	107,298 (15%)
Phosphate	36,942 (5%)	61,413 (8%)	49,324 (6%)	59,553 (8%)
Gilsonite	228 (<1%)	456 (<1%)	228 (<1%)	223 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 16. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN WHITE-TAILED PRAIRIE-DOG/BLACK-FOOTED FERRET HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	112,274 (90%)	114,783 (92%)	95,528 (77%)	69,283 (56%)
Timing and Controlled Surface Use	10,805 (9%)	8,296 (7%)	27,537 (22%)	48,241 (39%)
No Surface Occupancy	1,083 (1%)	1,083 (1%)	1,097 (1%)	6,638 (5%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Tar Sands				
Standard Stipulation	9,024 (7%)	9,024 (7%)	9,024 (7%)	6,544 (5%)
Timing and Controlled Surface Use	0 (0%)	0 (0%)	0 (0%)	2,502 (2%)
No Surface Occupancy	370 (<1%)	370 (<1%)	370 (<1%)	348 (<1%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Other Minerals (Open)				
Mineral Material	48,204 (39%)	48,204 (39%)	48,197 (39%)	48,204 (39%)
Oil Shale	41,932 (34%)	41,932 (34%)	41,932 (34%)	41,575 (33%)
Phosphate	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Gilsonite	46 (<1%)	93 (<1%)	46 (<1%)	46 (<1%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 17. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN MEXICAN SPOTTED OWL (CANYON) HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	5,443 (52%)	7,136 (68%)	5,256 (50%)	1,667 (28%)
Timing and Controlled Surface Use	3,833 (37%)	2,802 (27%)	2,722 (26%)	2,886 (49%)
No Surface Occupancy	63 (1%)	175 (2%)	62 (1%)	1,007 (17%)
No Leasing	1,129 (11%)	355 (3%)	2,428 (23%)	355 (6%)
Tar Sands				
Standard Stipulation	137 (1%)	365 (3%)	139 (1%)	38 (1%)
Timing and Controlled Surface Use	735 (7%)	507 (5%)	700 (7%)	724 (12%)
No Surface Occupancy	4 (<1%)	4 (<1%)	4 (<1%)	55 (1%)
No Leasing	6 (<1%)	6 (<1%)	40 (<1%)	6 (<1%)
Other Minerals (Open)				
Mineral Material	112 (1%)	113 (1%)	75 (1%)	56 (1%)
Oil Shale	5 (<1%)	5 (<1%)	5 (<1%)	5 (<1%)
Phosphate	217 (2%)	321 (3%)	227 (2%)	271 (5%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 18. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN MEXICAN SPOTTED OWL (FOREST) HABITAT

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	17,947 (46%)	28,207 (72%)	14,390 (37%)	17,724 (50%)
Timing and Controlled Surface Use	18,458 (47%)	9,830 (25%)	18,532 (47%)	13,289 (37%)
No Surface Occupancy	903 (2%)	903 (2%)	836 (2%)	4,267 (12%)
No Leasing	1,979 (5%)	347 (1%)	5,529 (14%)	347 (1%)
Tar Sands				
Standard Stipulation	733 (2%)	2,224 (6%)	735 (2%)	394 (1%)
Timing and Controlled Surface Use	6,156 (16%)	4,665 (12%)	6,154 (16%)	5,988 (17%)
No Surface Occupancy	0 (0%)	0 (0%)	0 (0%)	507 (1%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Other Minerals (Open)				
Mineral Material	5,722 (15%)	5,722 (15%)	5,649 (14%)	5,026 (14%)
Oil Shale	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Phosphate	561 (1%)	642 (2%)	518 (1%)	562 (2%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
*Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 19. MINERAL DEVELOPMENT LAND CATEGORIZATION PROPOSED IN FERRUGINOUS HAWK NESTING HABITAT¹

Oil and Gas Development				
	Alternative A*	Alternative B*	Alternative C*	Alternative D (No Action Alternative)
Standard Stipulation	46,906 (92%)	47,067 (93%)	38,342 (75%)	40,387 (82%)
Timing and Controlled Surface Use	3,398 (7%)	3,237 (6%)	11,952 (24%)	7,860 (16%)
No Surface Occupancy	524 (1%)	524 (1%)	534 (1%)	1,279 (3%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Tar Sands				
Standard Stipulation	6,784 (13%)	6,784 (13%)	6,662 (13%)	6,784 (14%)
Timing and Controlled Surface Use	0 (0%)	0 (0%)	122 (<1%)	0 (0%)
No Surface Occupancy	248 (<1%)	248 (<1%)	248 (<1%)	248 (<1%)
No Leasing	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Other Minerals (Open)				
Mineral Material	15,874 (31%)	15,874 (31%)	15,866 (31%)	15,975 (32%)
Oil Shale	10,480 (21%)	10,480 (21%)	10,480 (21%)	10,480 (21%)
Phosphate	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Gilsonite	0 (0%)	0 (0%)	0 (0%)	0 (0%)
¹ These calculations are to show an approximation of land management in the habitat type used by nesting ferruginous hawks. Calculations are based on areas associated within the ½ mile buffer around known active and inactive ferruginous hawk nests in the VPA. However, the areas within the ½ mile buffer zone for active and inactive ferruginous hawk nests will actually be managed under the special stimulations for raptors outlined in Chapter 4. *Includes land categorization for the Hill Creek Extension (Standard Stipulation: 160,998 acres, Timing & Controlled Surface Use: 29,832 acres).				

TABLE 20. HABITAT FRAGMENTS CREATED BY EXISTING ROADS AND PIPELINES ON BLM LANDS IN THE VPA AND ROAD EFFECTS ZONES ASSOCIATED WITH THESE FRAGMENTS

Vernal Planning Area								
Fragment Categories	All Fragments				Fragments 250 Acres or Greater			
	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development
Fragments created by roads or pipelines	4,485	383	99.6	Alt A: 93.2 Alt B: 95.0 Alt C: 84.5 Alt D: 89.0	736	2,194	93.6	Alt A: 80.6 Alt B: 82.2 Alt C: 73.2 Alt D: 77.6
Fragments outside the 660-foot road effects zone	2,849	492	81.2	Alt A: 92.7 Alt B: 94.8 Alt C: 83.5 Alt D: 88.3	696	1,891	76.3	Alt A: 79.6 Alt B: 81.4 Alt C: 71.7 Alt D: 76.5
Fragments outside the 1,320-foot road effects zone	2,394	477	66.1	Alt A: 92.1 Alt B: 94.6 Alt C: 82.4 Alt D: 87.5	593	1,803	62.0	Alt A: 78.5 Alt B: 80.5 Alt C: 70.2 Alt D: 74.9
Fragments outside the 2,640-foot road effects zone	1,510	505	44.2	Alt A: 90.8 Alt B: 93.9 Alt C: 80.2 Alt D: 85.3	413	1,728	41.4	Alt A: 76.6 Alt B: 79.2 Alt C: 67.4 Alt D: 72.3

TABLE 21. HABITAT FRAGMENTS CREATED BY EXISTING ROADS AND PIPELINES ON BLM LANDS IN THE MANILA-CLAY BASIN RFD AREA, AND ROAD EFFECTS ZONES ASSOCIATED WITH THESE FRAGMENTS

Fragment Categories	All Fragments				Fragments 250 Acres or Greater			
	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development
Fragments created by roads or pipelines	234	225	99.6	Alt A: 91.0 Alt B: 89.8 Alt C: 91.0 Alt D: 80.3	26	1,807	89.1	Alt A: 74.3 Alt B: 73.4 Alt C: 74.3 Alt D: 64.2
Fragments outside the 660-foot road effects zone	104	117	82.2	Alt A: 74.4 Alt B: 73.3 Alt C: 74.4 Alt D: 64.3	24	1,662	75.6	Alt A: 62.4 Alt B: 61.5 Alt C: 62.4 Alt D: 52.6
Fragments outside the 1,320-foot road effects zone	90	401	68.5	Alt A: 61.2 Alt B: 60.2 Alt C: 61.2 Alt D: 51.5	25	1,359	64.4	Alt A: 48.4 Alt B: 47.4 Alt C: 48.4 Alt D: 38.8
Fragments outside the 2,640-foot road effects zone	55	459	47.8	Alt A: 41.7 Alt B: 40.7 Alt C: 41.7 Alt D: 32.6	18	1,287	43.9	Alt A: 32.8 Alt B: 31.9 Alt C: 32.8 Alt D: 23.9

TABLE 22. FUNCTIONAL HABITAT LOSS CREATED BY PROPOSED ROADS AND PIPELINES ON BLM LANDS IN THE MANILA-CLAY BASIN RFD AREA

	Alternative A	Alternative B	Alternative C	Alternative D
Road and Pipeline Densities (mi/mi ²)	1.67	1.67	1.65	1.72
Percent outside a Functional Habitat Loss-660' zone	84%	84%	84%	80%
Percent outside a Functional Habitat Loss-1,320' zone	72%	72%	72%	65%
Percent outside a Functional Habitat Loss-2,640' zone	52%	52%	52%	42%
Tabiona-Ashley Valley RFD Area (367,419 acres)				

TABLE 23. HABITAT FRAGMENTS CREATED BY EXISTING ROADS AND PIPELINES ON BLM LANDS IN THE TABIONA-ASHLEY VALLEY RFD AREA, AND ROAD EFFECTS ZONES ASSOCIATED WITH THESE FRAGMENTS

Fragment Categories	All Fragments				Fragments 250 Acres or Greater			
	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development
Fragments created by roads or pipelines	1,233	297	99.7	Alt A: 91.7 Alt B: 94.2 Alt C: 83.7 Alt D: 86.2	165	2,044	91.8	Alt A: 74.2 Alt B: 76.4 Alt C: 68.5 Alt D: 70.0
Fragments outside the 660-foot road effects zone	715	431	83.9	Alt A: 77.2 Alt B: 79.6 Alt C: 70.8 Alt D: 72.4	155	1,864	78.6	Alt A: 63.3 Alt B: 65.4 Alt C: 58.4 Alt D: 59.6
Fragments outside the 1,320-foot road effects zone	559	467	71.0	Alt A: 65.3 Alt B: 67.6 Alt C: 60.1 Alt D: 70.0	136	1,797	66.5	Alt A: 53.4 Alt B: 55.2 Alt C: 49.7 Alt D: 49.9
Fragments outside the 2,640-foot road effects zone	370	506	50.9	Alt A: 46.5 Alt B: 48.5 Alt C: 43.1 Alt D: 43.1	102	1,714	47.6	Alt A: 37.5 Alt B: 39.1 Alt C: 35.0 Alt D: 34.6

TABLE 24. FUNCTIONAL HABITAT LOSS CREATED BY PROPOSED ROADS AND PIPELINES ON BLM LANDS IN THE TABIONA-ASHLEY VALLEY RFD AREA

	Alternative A	Alternative B	Alternative C	Alternative D
Road and Pipeline Densities (mi/mi ²)	1.23	1.22	1.12	1.36
Percent outside a Functional Habitat Loss-660' zone	88%	88%	89%	84%
Percent outside a Functional Habitat Loss-1,320' zone	78%	78%	80%	71%
Percent outside a Functional Habitat Loss-2,640' zone	62%	62%	65%	50%
Altamont-Bluebell RFD Area (14,375 acres)				

TABLE 25. HABITAT FRAGMENTS CREATED BY EXISTING ROADS AND PIPELINES ON BLM LANDS IN THE ALTAMONT-BLUEBELL RFD AREA, AND ROAD EFFECTS ZONES ASSOCIATED WITH THESE FRAGMENTS

Fragment Categories	All Fragments				Fragments 250 Acres or Greater			
	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development
Fragments created by roads or pipelines	64	224	99.7	Alt A: 98.3 Alt B: 98.3 Alt C: 98.3 Alt D: 68.8	10	1,280	89.0	Alt A: 70.3 Alt B: 70.3 Alt C: 70.3 Alt D: 68.8
Fragments outside the 660-foot road effects zone	45	266	83.4	Alt A: 82.5 Alt B: 82.5 Alt C: 82.5 Alt D: 81.1	9	1,172	73.3	Alt A: 60.1 Alt B: 60.1 Alt C: 60.1 Alt D: 60.1
Fragments outside the 1,320-foot road effects zone	35	287	69.8	Alt A: 69.3 Alt B: 69.3 Alt C: 69.3 Alt D: 68.1	9	1,003	62.8	Alt A: 50.2 Alt B: 50.2 Alt C: 50.2 Alt D: 50.2
Fragments outside the 2,640-foot road effects zone	32	218	48.5	Alt A: 48.6 Alt B: 48.6 Alt C: 48.6 Alt D: 47.9	8	805	44.8	Alt A: 39.3 Alt B: 39.3 Alt C: 39.3 Alt D: 39.3

TABLE 26. FUNCTIONAL HABITAT LOSS CREATED BY PROPOSED ROADS AND PIPELINES ON BLM LANDS IN THE ALTAMONT-BLUEBELL RFD AREA

	Alternative A	Alternative B	Alternative C	Alternative D
Road and Pipeline Densities (mi/mi ²)	7.96	7.96	7.96	8.09
Percent outside a Functional Habitat Loss-660' zone	10%	10%	10%	8%
Percent outside a Functional Habitat Loss-1,320' zone	0%	0%	0%	0%
Percent outside a Functional Habitat Loss-2,640' zone	0%	0%	0%	0%
Monument Butte-Redwash RFD Area (636,185 acres)				

TABLE 27. HABITAT FRAGMENTS CREATED BY EXISTING ROADS AND PIPELINES ON BLM LANDS IN THE MONUMENT BUTTE-REDWASH RFD AREA, AND ROAD EFFECTS ZONES ASSOCIATED WITH THESE FRAGMENTS

Fragment Categories	All Fragments				Fragments 250 Acres or Greater			
	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development
Fragments created by roads or pipelines	2,071	306	99.5	Alt A: 94.4 Alt B: 97.5 Alt C: 93.6 Alt D: 92.0	359	1,624	91.6	Alt A: 82.2 Alt B: 84.8 Alt C: 81.7 Alt D: 80.9
Fragments outside the 660-foot road effects zone	1,234	396	76.8	Alt A: 72.5 Alt B: 75.4 Alt C: 71.7 Alt D: 70.7	298	1,508	70.6	Alt A: 62.8 Alt B: 65.3 Alt C: 62.3 Alt D: 61.9
Fragments outside the 1,320-foot road effects zone	1,052	357	60.0	Alt A: 55.4 Alt B: 58.1 Alt C: 54.7 Alt D: 54.0	227	1,510	53.9	Alt A: 47.3 Alt B: 49.6 Alt C: 46.8 Alt D: 46.5
Fragments outside the 2,640-foot road effects zone	604	376	35.7	Alt A: 33.1 Alt B: 35.3 Alt C: 32.5 Alt D: 32.3	144	1,429	32.3	Alt A: 27.8 Alt B: 29.7 Alt C: 27.4 Alt D: 27.4

TABLE 28. FUNCTIONAL HABITAT LOSS CREATED BY PROPOSED ROADS AND PIPELINES ON BLM LANDS IN THE MONUMENT BUTTE-REDWASH RFD AREA

	Alternative A	Alternative B	Alternative C	Alternative D
Road and Pipeline Densities (mi/mi ²)	4.10	4.10	4.08	3.68
Percent outside a Functional Habitat Loss-660' zone	63%	64%	64%	62%
Percent outside a Functional Habitat Loss-1,320' zone	35%	35%	35%	32%
Percent outside a Functional Habitat Loss-2,640' zone	0%	0%	0%	0%
West Tavaputs Plateau RFD Area (180,446 acres)				

TABLE 29. HABITAT FRAGMENTS CREATED BY EXISTING ROADS AND PIPELINES ON BLM LANDS IN THE WEST TAVAPUTS PLATEAU RFD AREA, AND ROAD EFFECTS ZONES ASSOCIATED WITH THESE FRAGMENTS

Fragment Categories	All Fragments				Fragments 250 Acres or Greater			
	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development
Fragments created by roads or pipelines	213	845	99.7	Alt A: 98.0 Alt B: 98.8 Alt C: 86.3 Alt D: 86.3	59	2,987	97.7	Alt A: 88.5 Alt B: 89.2 Alt C: 78.5 Alt D: 78.5
Fragments outside the 660-foot road effects zone	189	815	85.3	Alt A: 83.8 Alt B: 84.5 Alt C: 73.1 Alt D: 73.1	61	2,435	82.3	Alt A: 73.9 Alt B: 74.5 Alt C: 64.9 Alt D: 64.6
Fragments outside the 1,320-foot road effects zone	172	763	72.7	Alt A: 71.4 Alt B: 72.0 Alt C: 61.6 Alt D: 61.6	56	2,251	69.9	Alt A: 62.7 Alt B: 63.3 Alt C: 54.3 Alt D: 54.1
Fragments outside the 2,640-foot road effects zone	135	693	51.9	Alt A: 50.8 Alt B: 51.3 Alt C: 42.6 Alt D: 42.5	47	1,902	49.5	Alt A: 43.3 Alt B: 43.7 Alt C: 36.3 Alt D: 36.2

TABLE 30. FUNCTIONAL HABITAT LOSS CREATED BY PROPOSED ROADS AND PIPELINES ON BLM LANDS IN THE WEST TAVAPUTS PLATEAU RFD AREA

	Alternative A	Alternative B	Alternative C	Alternative D
Road and Pipeline Densities (mi/mi ²)	1.47	1.47	1.41	1.82
Percent outside a Functional Habitat Loss-660' zone	83%	83%	84%	78%
Percent outside a Functional Habitat Loss-1,320' zone	68%	68%	70%	60%
Percent outside a Functional Habitat Loss-2,640' zone	42%	42%	42%	28%
East Tavaputs Plateau RFD Area (474,288 acres)				

TABLE 31. HABITAT FRAGMENTS CREATED BY EXISTING ROADS AND PIPELINES ON BLM LANDS IN THE EAST TAVAPUTS PLATEAU RFD AREA, AND ROAD EFFECTS ZONES ASSOCIATED WITH THESE FRAGMENTS

Fragment Categories	All Fragments				Fragments 250 Acres or Greater			
	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development	Number	Average Size (acres)	% of Total Area	% Open to Minerals Development
Fragments created by roads or pipelines	867	545	99.7	Alt A: 89.6 Alt B: 90.0 Alt C: 70.0 Alt D: 87.7	167	2,714	95.6	Alt A: 79.2 Alt B: 79.5 Alt C: 61.5 Alt D: 78.5
Fragments outside the 660-foot road effects zone	562	702	83.1	Alt A: 73.9 Alt B: 74.4 Alt C: 57.0 Alt D: 72.4	149	2,543	80.0	Alt A: 64.9 Alt B: 65.2 Alt C: 49.7 Alt D: 64.4
Fragments outside the 1,320-foot road effects zone	486	673	70.0	Alt A: 60.7 Alt B: 61.0 Alt C: 46.1 Alt D: 59.4	140	2,235	66.0	Alt A: 53.3 Alt B: 53.5 Alt C: 40.1 Alt D: 52.8
Fragments outside the 2,640-foot road effects zone	387	577	47.0	Alt A: 40.3 Alt B: 40.6 Alt C: 29.8 Alt D: 39.4	119	1,780	44.7	Alt A: 35.3 Alt B: 35.5 Alt C: 25.6 Alt D: 34.8

TABLE 32. FUNCTIONAL HABITAT LOSS CREATED BY PROPOSED ROADS AND PIPELINES ON BLM LANDS IN THE EAST TAVAPUTS PLATEAU RFD AREA

	Alternative A	Alternative B	Alternative C	Alternative D
Road and Pipeline Densities (mi/mi ²)	1.18	1.18	1.12	1.80
Percent outside a Functional Habitat Loss-660' zone	87%	87%	87%	79%
Percent outside a Functional Habitat Loss-1,320' zone	74%	74%	76%	61%
Percent outside a Functional Habitat Loss-2,640' zone	53%	53%	55%	33%